

Monetary and Fiscal Policy

Tools of Monetary and Fiscal Policy

Both monetary and fiscal policy can be used to influence the inflation rate and real output. In Table 5-3.1, use ↑ or ↓ to indicate what effect each specific policy has on inflation and real output in the short run.



Table 5-3.1

Monetary Policy

Monetary policy	Price level	Real output
1. Raise the federal funds rate		
2. Decrease the discount rate		
3. Decrease reserve requirement		

Fiscal policy	Price level	Real output
4. Increase government spending		
5. Increase taxes		

Policy Effects on Aggregate Supply

Fiscal and monetary policy affect the economy through changes in aggregate demand (AD). There are also policies that can affect the short-run aggregate supply (SRAS) and long-run aggregate supply (LRAS). Any policy that changes a determinant of SRAS or leads to long-run economic growth will affect the macroeconomy through the supply side. The determinants of SRAS include changes in economy-wide input prices (like wages and the price of oil) and productivity. Factors that affect the LRAS include increases in available resources, higher quality resources, or technological advances.

1. Assume the government grants businesses a substantial tax credit on capital investment. Circle the correct symbol (\uparrow for increase, \downarrow for decrease) to indicate what will happen to the following as a result of the tax credit.

(A) Capital investment	\uparrow	\downarrow
(B) AD	\uparrow	\downarrow
(C) The amount of capital available to labor	\uparrow	\downarrow
(D) Productivity	\uparrow	\downarrow
(E) Firms' unit cost of production	\uparrow	\downarrow
(F) SRAS	\uparrow	\downarrow
(G) LRAS	\uparrow	\downarrow
(H) Real gross domestic product (GDP)	\uparrow	\downarrow

2. How will a decrease in business taxes affect firms' per unit costs?

Monetary and Fiscal Policy Interactions

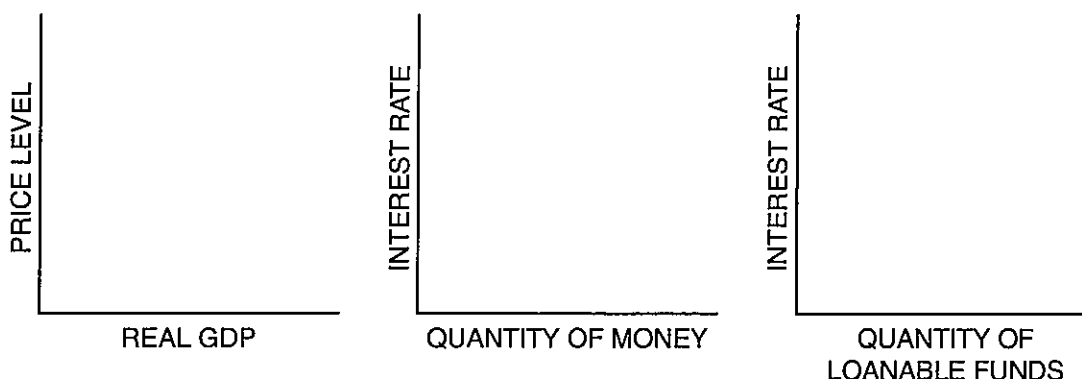
In the figures accompanying each question, illustrate the short-run effects for each monetary and fiscal policy combination using the money market, the loanable funds market, and aggregate supply/aggregate demand (AS/AD) graph. Circle the up or down arrow (or ? for uncertain), and explain the effect of the policies on real gross domestic product (GDP), the price level, unemployment, interest rates, and investment.

1. The unemployment rate is 10 percent, and the inflation rate is 2 percent. The federal government cuts personal income taxes and increases its spending. The Federal Reserve (the Fed) buys bonds on the open market.



Figure 5-5.1

Expansionary Monetary and Fiscal Policy



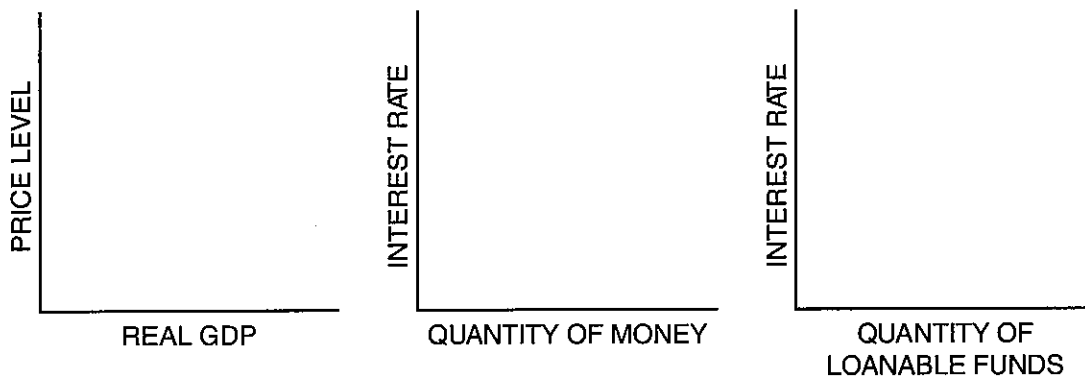
(A) Real GDP	↑	↓	?	Explain.
(B) The price level	↑	↓	?	Explain.
(C) Unemployment	↑	↓	?	Explain.
(D) Interest rates	↑	↓	?	Explain.
(E) Investment	↑	↓	?	Explain.

2. The unemployment rate is 6 percent, and the inflation rate is 9 percent. The federal government raises personal income taxes and cuts spending. The Fed sells bonds on the open market.



Figure 5-5.2

Contractionary Monetary and Fiscal Policy



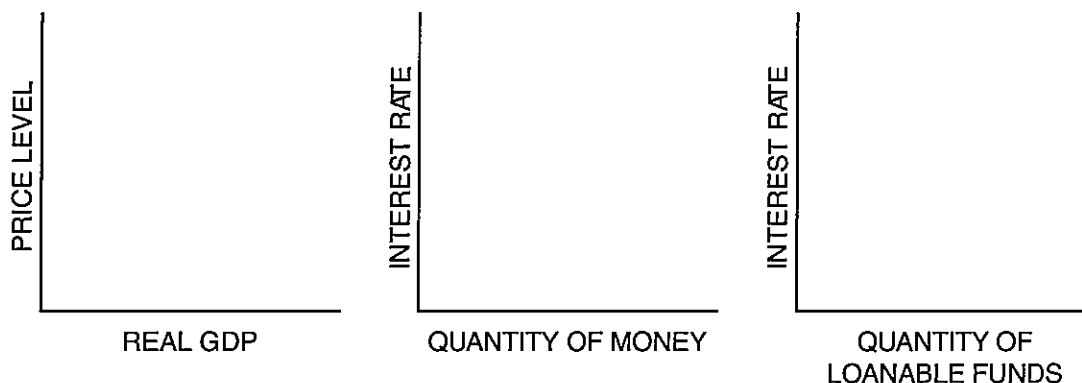
(A) Real GDP	↑	↓	?	Explain.
(B) The price level	↑	↓	?	Explain.
(C) Unemployment	↑	↓	?	Explain.
(D) Interest rates	↑	↓	?	Explain.
(E) Investment	↑	↓	?	Explain.

3. The unemployment rate is 6 percent, and the inflation rate is 5 percent. The federal government cuts personal income taxes and maintains current spending. The Fed sells bonds on the open market.



Figure 5-5.3

Contractionary Monetary Policy and Expansionary Fiscal Policy



(A) Real GDP	↑	↓	?	Explain.
(B) The price level	↑	↓	?	Explain.
(C) Unemployment	↑	↓	?	Explain.
(D) Interest rates	↑	↓	?	Explain.
(E) Investment	↑	↓	?	Explain.

The Deficit and the Debt

The two primary tools of discretionary fiscal policy are government spending (G) and taxes (T). When government conducts expansionary fiscal policy to counteract recession, G increases and/or T decreases. When G increases and/or T decreases, the government budget moves toward deficit. A budget deficit occurs when the government spends more than it collects in taxes and borrows to cover the difference. It does this by issuing bonds. The sum of past deficits is the debt. The debt incurs annual interest charges.

When the government conducts contractionary fiscal policy to alleviate inflationary pressures, G decreases and/or T increases. When G decreases and/or T increases, the government budget moves toward surplus. A budget surplus happens when the government taxes more than it spends. The surplus can be used to reduce the debt.

The effect of government borrowing can be modeled using the loanable funds market. A government budget deficit results in an increase in the demand (D) for loanable funds. A budget surplus reduces the demand for loanable funds. It results in an increase in the supply (S) of loanable funds if government pays off the debt.

1. Complete Table 5-6.1. Circle deficit or surplus, and in the other columns place an up arrow for increase, a down arrow for decrease, or NC for no change.



Table 5-6.1

Budget Effects of Fiscal Policy

Fiscal policy	Tools of fiscal policy	Effect on government's budget	Effect on debt	Effect on loanable funds market	Effect on real interest rate
Expansionary	G__ T__	<i>Deficit / Surplus</i>		D__ S__	
Contractionary	G__ T__	<i>Deficit / Surplus</i>		D__ S__	

The central bank of a country can counteract the effect of budget deficits on the real interest rate by conducting an open market purchase of government securities. When the central bank purchases the securities directly from the government, this is referred to as monetizing the debt and is seen as highly inflationary. The effect of an open-market purchase of government securities can be modeled using the money market.

2. Draw a graph of the money market showing how an open-market purchase of government securities affects the nominal interest rate.



3. How would the change in the nominal interest rate affect the real interest rate? Explain.

4. Why is monetizing the debt inflationary?

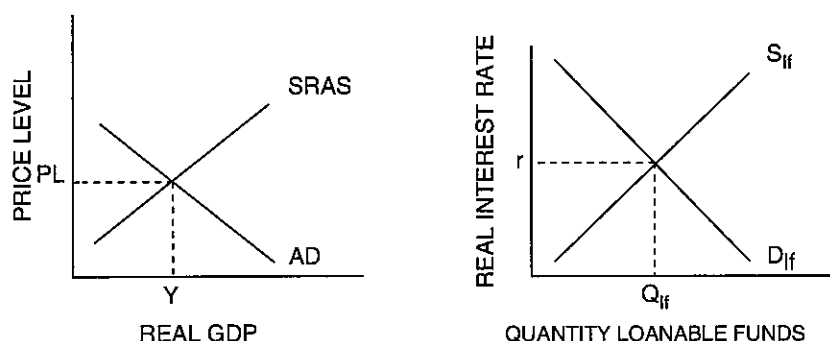
Crowding Out

Expansionary fiscal policy increases aggregate demand and moves the budget toward deficit. If deficit spending is financed through borrowing, the government will demand loanable funds. The government's demand for loanable funds (D_{lf}) added to the demand for loanable funds by private borrowers. Thus expansionary fiscal policy increases D_{lf} and may cause interest rates to rise. Because the government is borrowing money to finance its expansionary fiscal policy, consumers and businesses will be "crowded out" of financial markets. If consumers and businesses are not able to borrow to finance spending, it will lead to a decrease in aggregate demand (AD).

Crowding out occurs when the government borrows to pursue expansionary fiscal policy and such government borrowing replaces private borrowing and spending. Because some private borrowing and spending is "crowded out" of the economy, part of the increase in aggregate demand from increased government spending (and/or decreased taxes) is offset by a decrease in aggregate demand from decreased consumption and investment as interest rates rise.



Figure 5-7.1
Crowding Out



1. Assume fiscal policy is expansionary and the government funds the resulting deficit through borrowing. In Figure 5-7.1, shift one curve in each graph to illustrate the effect of the fiscal policy, and label the new equilibrium values.
2. How will the change in the equilibrium interest rate in the loanable funds market affect the short-run aggregate supply (SRAS) curve in the long run? Show on the AS/AD graph above, and explain.